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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,801	09/23/2004	Jacoby M. Thwaites	498.02.02	3943

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EXAMINER

FEARER, MARK D

ART UNIT	PAPER NUMBER
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2143

MAIL DATE	DELIVERY MODE
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02/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/508,801

Applicant(s)

THWAITES ET AL.

Examiner

Mark D. Fearer

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 11-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____



DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 9 and 11-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

Claims 9 and 11-16 claim the non-statutory subject matter of a program. Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1754 (claim to a data structure per se held nonstatutory). Therefore, since the claimed

programs are not tangibly embodied in a physical medium and encoded on a computer-readable medium then the Applicants has not complied with 35 U.S.C 101.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-6, 8-9, 11-14, and 16-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Jones et al. (US 6216173 B1).

Consider claim 1. Jones et al. clearly shows and discloses a method of facilitating the exchange and processing of information in and between a plurality of Blocks (read as objects, column 2 lines 35-44), each Block comprising an information-providing, information-processing or information-consuming element in an integrated data network, at least one Block having a requirement to receive information from one or more Blocks, the method comprising providing an Information Routing Layer to manage the exchange of information between Blocks and the fulfillment of at least one Consumer Function from a Block having a requirement to receive information and a capacity to provide an output in response to the receipt of that information (column 6

lines 20-66); wherein each Block which can provide or process information on the network is registered at the Information Routing Layer (column 2 lines 45-55, and column 6 lines 20-66, and column 9 line 13 - column 10 line 56); one or more Blocks has an information-processing capability to produce an Output Field set when provided with a specified Input Field set. This capability is recorded in the Information Routing Layer in the form of an Exchange Function for each Block with said capability specifying the Input Field set and the Output Field set for each such Block (column 6 lines 20-66, and column 9 line 13 - column 10 line 56); a unit of information is handled in the Information Routing Layer as a field within a Dataset uniquely identified and associated with the Block first responsible for providing information in such Dataset and information is input to and output from a Block in a Field set (column 21 lines 42-57); on recognition of a Consumer Function specifying an Input Field set and an Output Field set, the Information Routing Layer operates to match the Input Field set requested for the Consumer Function with a Proper Set comprising a corresponding Field set selected from an available Dataset or Datasets or to form an Aggregate Route (A-B-C, A-B-D, A-B-F) using one or more Fields from an available Dataset or Datasets with one or more Exchange Function(s) so as to enable fulfillment of the Consumer Function Input Field set; and following supply of the Input Field set to the Consumer Function, the Information Routing Layer (3) places the Output Field set delivered by the Consumer Function onto a new Dataset (column 11 line 34 – column 14 line 25, and column 18 line 60 – column 29 line 18).

Consider claim 3, as applied to claim 1. Jones et al. further discloses a method in which a Function is provided with one or more associated Attribute(s) and the Information Routing Layer utilizes the Attribute(s) in determining how to provide or process Input or Output Field sets to or from the said Function (column 12 lines 38-54).

Consider claim 4, as applied to claim 3. Jones et al. further discloses a method in which a Consumer Function specifies a Consumer Function Value as an associated Attribute, and/or an Exchange Function specifies an Exchange Function Cost as an associated Attribute, each said Value and/or Cost being a representative measure of a critical resource which is relevant as a determining factor in the operation of the Information Routing Layer, and the Information Routing Layer uses the specified Consumer Function Value and/or Exchange Function Cost(s) to determine whether a particular Consumer Function Input Field set can or should be provided appropriately by possible Exchanges, within the applicable resource constraints (column 9 line 39 – column 10 line 52).

Consider claim 5, as applied to claim 3. Jones et al. further discloses a method in which an Attribute associated with a Function determines whether the Information Routing Layer treats that Function as a Consumer Function or as an Exchange Function (column 12 line 65 – column 15 line 2).

Consider claim 6, as applied to claim 1. Jones et al. further discloses a method in which a Field in an Output Field set from a Function may be marked to be discarded by the Information Routing Layer (column 31 line 31 – column 32 line 3).

Consider claim 8, as applied to claim 1. Jones et al. further discloses a method in which a Block intending to provide to the Information Routing Layer, unsolicited, a Field set, all the Fields of which are intended to be made available together on a new Dataset, indicates this intention to the Information Routing Layer by raising a Provider Function having the intended Fields specified in the Provider Function Output Field set and a null Input Field set (column 4 lines 30-39).

Consider claim 9. Jones et al. clearly shows and discloses an Information Router for facilitating the exchange and processing of information in and between a plurality of Blocks (read objects, column 2 lines 35-44), each Block comprising an information-providing, information-processing or information-consuming element in an integrated data network, at least one Block having a requirement to receive information from one or more other Blocks, the Information Router utilizing one or more computer processor(s) programmed to manage the exchange of information between Blocks and the fulfillment of a specific Consumer Function from a Block having a requirement to receive information and a capacity to provide an output in response to the receipt of that information (column 6 lines 20-66); whereby each Block which can provide or process information on the network is registered by the Information Router (column 2 lines 45-55, and column 6 lines 20-66, and column 9 line 13 - column 10 line 56); one or more Blocks has an information-processing capability to produce a specified Output Field set when provided with a specified Input Field set, and wherein the Information Router is programmed to record such capability in the form of an Exchange Function for each Block with such capability specifying the Input Field Set and the Output Field set for

each such Block (column 6 lines 20-66, and column 9 line 13 - column 10 line 56); a unit of information is processed by the Information Router as a Field within a Dataset uniquely identified and associated with the Block first responsible for providing information in such Dataset and information is input to and output from a Block in a Field set (column 21 lines 42-57); and whereby on recognition of a Consumer Function specifying an Input Field set and an Output Field set, the Information Router will operate to match the Input Field set requested for the Consumer Function with a Proper Set comprising a corresponding Field set selected from an available Dataset or Datasets or to form an Aggregate Route using one or more Fields from an available Dataset or Datasets with one or more Exchange Function(s) so as to enable fulfillment of the Consumer Function Input Field set; and, following supply of the Input Field set to the Consumer Function, to place the Output Field set delivered by the Consumer Function onto a new Dataset (column 11 line 34 – column 14 line 25, and column 18 line 60 – column 29 line 18).

Consider claim 11, as applied to claim 9. Jones et al. further discloses an Information Router programmed to use an Attribute associated with a given Function in determining how to provide or process input or Output Field sets to or from the said Function (column 12 lines 38-54).

Consider claim 12, as applied to claim 11. Jones et al. further discloses an Information Router programmed to use an Attribute identified as a Consumer Function Value when specified in a Consumer Function, and/or an Attribute identified as an

Exchange Function Cost when specified in an Exchange Function, each said Value and/or Cost being a representative measure of a critical resource which is relevant as a determining factor in the operation of the Information Router, and wherein, in operation, the Information Router uses the specified Consumer Function Value and/or Exchange Function Cost(s) to determine whether a particular Consumer Function Input Field set can or should be provided appropriately by possible Exchanges, within the applicable resource constraints (column 9 line 39 – column 10 line 52).

Consider claim 13, as applied to claim 11. Jones et al. further discloses an Information Router programmed to use an Attribute associated with a Function to determine whether that Function is to be treated as a Consumer Function or as an Exchange Function (column 12 line 65 – column 15 line 2).

Consider claim 14, as applied to claim 9. Jones et al. further discloses an Information Router programmed to recognize that a Field in an Output Field set from a Function is to be discarded by the Information Router (column 31 line 31 – column 32 line 3).

Consider claim 16, as applied to claim 9. Jones et al. further discloses an Information Router programmed to enable a Block intending to provide, unsolicited, a Field set, all the Fields of which are to be made available together by the Information Router on a new Dataset, to indicate this intention by raising a Provider Function having the intended Fields specified in the Provider Function Output Field set and a null Input Field set (column 4 lines 30-39).

Consider claim 17, according to claim 1. Jones et al. further discloses a method in which the Information Routing Layer is instantiated on request (column 9 lines 39-51).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (US 6216173 B1) in view of Wookey et al. (US 7167448 B2).

Consider claims 7 and 15, as applied to claims 1 and 9, respectively. Jones et al. discloses a method comprising an Input Field set or an Output Field set. However, Jones et al. fails to teach a method comprising a set that is an empty or null set. Wookey et al. discloses a method of prioritization of remote services messages within a low bandwidth environment wherein a set can be an empty set or a null set (column 23 lines 19-27).

Therefore, it would have been obvious for a person of ordinary skill in the art at the time the invention was made to incorporate a method of prioritization of remote services messages within a low bandwidth environment wherein a set can be an empty set or a null set as taught by Wookey et al. with a method comprising an Input Field set or an Output Field set as taught by Jones et al. for the purpose of identification tagging of a route.

Conclusion

Any response to this Office Action should be faxed to (571) 273-8300 or mailed to:

Commissioner for Patents

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P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window

Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Mark Fearer whose telephone number is (571) 270-1770. The Examiner can normally be reached on Monday-Thursday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Mark Fearer
M.D.F./mdf
February 6, 2008

A handwritten signature in black ink, appearing to read 'Mark Fearer', followed by a large, stylized 'Z' or '2'.